

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application:

Claim 1–13 (cancelled).

Claim 14 (previously presented): A method of reducing signal loss in an optical signal transmission system using a multimode optical fibre, the method comprising:

coupling a signal into the multimode optical fibre using a launch at an offset from the fibre axis,
wherein the signal is a radio-frequency-modulated signal.

Claim 15 (previously presented): The method of claim 14 wherein the launch is collinear with an axis of the multimode fibre.

Claim 16 (previously presented): The method of claim 14 wherein the signal is provided by a transverse mode laser transmitter.

Claim 17 (previously presented): The method of claim 14 wherein the launch comprises a single transverse mode laser coupled to a single mode fibre pigtail in communication with a graded-index multimode fibre using a mode-conditioning patchcord.

Claim 18 (previously presented): The method of claim 14 wherein the launch comprises a laser receptacle package coupled to a graded-index multimode fibre where the axis of the optical output from a single transverse mode laser has been offset from that of the fibre.

Claim 19 (previously presented): The method of claim 14 wherein the multimode fibre has a core diameter of 62.5µm and wherein the coupling step comprises using a launch having an offset distance measured from the centre of the multimode fibre core to the centre of the optical radiation emitted from the transmitter of approximately 10µm to approximately 30µm.

Claim 20 (previously presented): The method of claim 19 where the offset distance measured from the centre of the multimode fibre core to the centre of the optical radiation emitted from the transmitter is approximately 23µm to approximately 30µm.

Claim 21 (previously presented): The method of claim 14 wherein the multimode fibre is selected from the group consisting of fibre installed within a building, uninstalled fibre, silica

fibre, plastic fibre, fibre with multiple splices, fibre with multiple connectors, fibre with low specified bandwidth, and fibre with high specified bandwidth.

Claim 22 (previously presented): A radio frequency optical communication system comprising:
a multimode optical fibre;
a laser transmitter having an input port for causing the laser transmitter to provide radio-frequency modulated optical signals to said fibre; and
a coupler between the laser transmitter and the fibre, the coupler having a launch offset from the fibre axis.

Claim 23 (previously presented): The radio frequency optical communication system of claim 22 wherein the laser transmitter is a single transverse mode laser transmitter.

Claim 24 (previously presented): The radio frequency optical communication system of claim 22 wherein the launch restricts the number of modes excited in the fibre.

Claim 25 (previously presented): The radio frequency optical communication system of claim 22 wherein the launch is collinear with an axis of the multimode optical fibre.

Claim 26 (previously presented): The radio frequency optical communication system of claim 22 further comprising a photodetector.

Claim 27 (previously presented): The radio frequency optical communication system of claim 26 further comprising a demodulator for demodulating the output of the photodetector.

Claim 28 (previously presented): The radio frequency optical communication system of claim 22 wherein the fibre has a core diameter of $62.5\mu\text{m}$ and wherein the offset distance measured from the centre of the multimode fibre core to the centre of the optical radiation emitted from the transmitter is approximately $10\mu\text{m}$ to approximately $30\mu\text{m}$.

Claim 29 (previously presented): The radio frequency optical communication system of claim 28 wherein the offset distance measured from the centre of the multimode fibre core to the centre of the optical radiation emitted from the transmitter is approximately $23\mu\text{m}$ to approximately $30\mu\text{m}$.